

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

#8 SK
8/11/00

1642

RAW SEQUENCE LISTING DATE: 07/24/2000
 PATENT APPLICATION: US/09/434,708 TIME: 16:52:46

Input Set : A:\B8017159.txt
 Output Set: N:\CRF3\07242000\I434708.raw

4 <110> APPLICANT: Borriello, Francescopaolo
 5 Band, Hamid
 7 <120> TITLE OF INVENTION: Characterization of a novel gene Cbl-SL
 10 <130> FILE REFERENCE: B0801/7159/ERP
 12 <140> CURRENT APPLICATION NUMBER: 09/434,708
 13 <141> CURRENT FILING DATE: 1999-11-05
 15 <150> PRIOR APPLICATION NUMBER: U.S. 60/107,470
 16 <151> PRIOR FILING DATE: 1998-11-06
 18 <160> NUMBER OF SEQ ID NOS: 10
 20 <170> SOFTWARE: FastSEQ for Windows Version 3.0
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 1547
 24 <212> TYPE: DNA
 25 <213> ORGANISM: Homo Sapiens
 27 <220> FEATURE:
 28 <221> NAME/KEY: CDS
 29 <222> LOCATION: (13)...(1434)
 31 <400> SEQUENCE: 1
 32 cgcgaggctc cc atg gct ctg gcg gtg gcc ccg tgg ggg cga cag tgg gaa 51
 33 Met Ala Leu Ala Val Ala Pro Trp Gly Arg Gln Trp Glu
 34 1 5 10
 36 gag gcc cgc gcc ctg gcc cgg gca gtc agg atg ctg cag cgc cta gaa 99
 37 Glu Ala Arg Ala Leu Gly Arg Ala Val Arg Met Leu Gln Arg Leu Glu
 38 15 20 25
 40 gag caa tgc gtc gac ccc cgg ctg tcc gtg agt ccc cct tgc ctg cgg 147
 41 Glu Gln Cys Val Asp Pro Arg Leu Ser Val Ser Pro Pro Ser Leu Arg
 42 30 35 40 45
 44 gac ctg ctg ccc cgc aca gcg cag ctg ctt cga gag gtg gcc cat tct 195
 45 Asp Leu Leu Pro Arg Thr Ala Gln Leu Arg Glu Val Ala His Ser
 46 50 55 60
 48 cgg cgg gcg gcc gcc gga gcc gcc ccc ggg ggt ccc gcc gcc tct ggg 243
 49 Arg Arg Ala Ala Gly Gly Gly Gly Pro Gly Gly Pro Gly Gly Ser Gly
 50 65 70 75
 52 gac ttt cta ctc atc tac ctg gcc aat ctg gag gcc aag agc agg cag 291
 53 Asp Phe Leu Leu Ile Tyr Leu Ala Asn Leu Glu Ala Lys Ser Arg Gln
 54 80 85 90
 56 gtg gcc gcg ctg ctg cct ccc cgg gcc cga agg agt gcc aac gac gag 339
 57 Val Ala Ala Leu Leu Pro Pro Arg Gly Arg Arg Ser Ala Asn Asp Glu
 58 95 100 105
 60 ctc ttc cgg gcg gcc tcc aga ctc agg cga cag ctg gcc aag ctg gcc 387
 61 Leu Phe Arg Ala Gly Ser Arg Leu Arg Arg Gln Leu Ala Lys Leu Ala
 62 110 115 120 125
 64 atc atc ttc agc cac atg cac gca gag ctg cac gca ctc ttc ccc ggg 435
 65 Ile Ile Phe Ser His Met His Ala Glu Leu His Ala Leu Phe Pro Gly
 66 130 135 140
 68 gca aag tac tgt gga cac atg tac cag ctc acc aag gcc ccc gcc cac 483
 69 Ala Lys Tyr Cys Gly His Met Tyr Gln Leu Thr Lys Ala Pro Ala His

ENTERED

RECEIVED
 AUG - 7 2000
 TC 1600 MAIL ROOM

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/434,708

DATE: 07/24/2000

TIME: 16:52:46

Input Set : A:\B8017159.txt

Output Set: N:\CRF3\07242000\I434708.raw

70		145		150		155		
72	acc	ttc	tgg	agg	gaa	agt	tgc	gga
73	Thr	Phe	Trp	Arg	Glu	Ser	Cys	Gly
74		160		165		170		
76	gag	ttt	gag	tcc	ctc	ctg	ggc	acc
77	Glu	Phe	Glu	Ser	Leu	Leu	Gly	Thr
78		175		180		185		
80	aca	gcc	ctg	gcc	ttg	cgc	acc	acc
81	Thr	Ala	Leu	Ala	Leu	Arg	Thr	Thr
82	190			195		200		205
84	gtg	tcc	atc	ttc	gag	ttc	gac	gtc
85	Val	Ser	Ile	Phe	Glu	Phe	Thr	Arg
86		210		215		220		
88	cca	aca	ctc	ctc	aag	aac	tgg	cag
89	Pro	Thr	Leu	Leu	Lys	Asn	Trp	Gln
90		225		230		235		
92	tac	atg	gcc	ttc	ctc	acc	tat	gat
93	Tyr	Met	Ala	Phe	Leu	Thr	Tyr	Asp
94		240		245		250		
96	tgc	agg	gac	aag	cca	ggc	agt	tac
97	Cys	Arg	Asp	Lys	Pro	Gly	Ser	Tyr
98		255		260		265		
100	ctg	ggg	cag	tgg	gcc	atc	ggc	tat
101	Leu	Gly	Gln	Trp	Ala	Ile	Gly	Tyr
102		270		275		280		285
104	cag	acc	atc	cct	gcc	aac	aaa	ccc
105	Gln	Thr	Ile	Pro	Ala	Asn	Lys	Pro
106		290		295		300		
108	cag	aag	gac	ggc	ttc	tac	ctc	tac
109	Gln	Lys	Asp	Gly	Phe	Tyr	Leu	Tyr
110		305		310		315		
112	gac	ctg	act	gag	ctc	ggc	cag	gca
113	Asp	Leu	Thr	Glu	Leu	Gly	Gln	Ala
114		320		325		330		
116	tca	gag	gag	cag	ctg	cag	ctc	tac
117	Ser	Glu	Glu	Gln	Leu	Gln	Tyr	Trp
118		335		340		345		
120	ctc	tgc	aag	atc	tgt	gct	gag	agc
121	Leu	Cys	Lys	Ile	Cys	Ala	Glu	Ser
122		350		355		360		365
124	tgc	ggg	cac	ctg	ctc	tgc	agc	tgc
125	Cys	Gly	His	Leu	Cys	Ser	Cys	Cys
126		370		375		380		
128	gac	agc	cag	acc	tgc	ccc	ttc	tgc
129	Asp	Ser	Gln	Thr	Cys	Pro	Phe	Cys
130		385		390		395		
132	gcc	gtg	agt	atc	tac	cag	ttc	cac
133	Ala	Val	Ser	Ile	Tyr	Gln	Phe	His
134		400		405		410		

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/434,708

DATE: 07/24/2000

TIME: 16:52:46

Input Set : A:\B8017159.txt

Output Set: N:\CRF3\07242000\I434708.raw

```

136 ggg aac agc agt gac cag gaa ggc agg gag ttg gag ctg ggg cag gtg 1299
137 Gly Asn Ser Ser Asp Gln Glu Gly Arg Glu Leu Glu Leu Gly Gln Val
138 415 420 425
140 ccc ctt tcg gct cct cca ttg ccc cca cgg cca gat ctg ccc ccc agg 1347
141 Pro Leu Ser Ala Pro Pro Leu Pro Pro Arg Pro Asp Leu Pro Pro Arg
142 430 435 440 445
144 aag ccc aga aat gcc cag ccg aaa gtg aga ctc cta aag ggg aac tcc 1395
145 Lys Pro Arg Asn Ala Gln Pro Lys Val Arg Leu Leu Lys Gly Asn Ser
146 450 455 460
148 cct cca gct gcg ctg gga ccc cag gac cct gcc ccg gcc tgaaggccag 1444
149 Pro Pro Ala Ala Leu Gly Pro Gln Asp Pro Ala Pro Ala
150 465 470
152 ggcacccaga tgtgtgctc aagggagccc caagggctgg aagggggttg tgaaccgaa 1504
153 ataaactgcc aagcctggc tgtcaaaaaa aaaaaaaaaa aaa 1547
155 <210> SEQ ID NO: 2
156 <211> LENGTH: 474
157 <212> TYPE: PRT
158 <213> ORGANISM: Homo Sapiens
160 <400> SEQUENCE: 2
161 Met Ala Leu Ala Val Ala Pro Trp Gly Arg Gln Trp Glu Glu Ala Arg
162 1 5 10 15
163 Ala Leu Gly Arg Ala Val Arg Met Leu Gln Arg Leu Glu Glu Gln Cys
164 20 25 30
165 Val Asp Pro Arg Leu Ser Val Ser Pro Pro Ser Leu Arg Asp Leu Leu
166 35 40 45
167 Pro Arg Thr Ala Gln Leu Leu Arg Glu Val Ala His Ser Arg Arg Ala
168 50 55 60
169 Ala Gly Gly Gly Gly Pro Gly Gly Pro Gly Gly Ser Gly Asp Phe Leu
170 65 70 75 80
171 Leu Ile Tyr Leu Ala Asn Leu Glu Ala Lys Ser Arg Gln Val Ala Ala
172 85 90 95
173 Leu Leu Pro Pro Arg Gly Arg Arg Ser Ala Asn Asp Glu Leu Phe Arg
174 100 105 110
175 Ala Gly Ser Arg Leu Arg Arg Gln Leu Ala Lys Leu Ala Ile Ile Phe
176 115 120 125
177 Ser His Met His Ala Glu Leu His Ala Leu Phe Pro Gly Ala Lys Tyr
178 130 135 140
179 Cys Gly His Met Tyr Gln Leu Thr Lys Ala Pro Ala His Thr Phe Trp
180 145 150 155 160
181 Arg Glu Ser Cys Gly Ala Arg Cys Val Leu Pro Trp Ala Glu Phe Glu
182 165 170 175
183 Ser Leu Leu Gly Thr Cys His Pro Val Glu Pro Gly Cys Thr Ala Leu
184 180 185 190
185 Ala Leu Arg Thr Thr Ile Asp Leu Thr Cys Ser Gly His Val Ser Ile
186 195 200 205
187 Phe Glu Phe Asp Val Phe Thr Arg Leu Phe Gln Pro Trp Pro Thr Leu
188 210 215 220
189 Leu Lys Asn Trp Gln Leu Leu Ala Val Asn His Pro Gly Tyr Met Ala
190 225 230 235 240

```

RAW SEQUENCE LISTING

DATE: 07/24/2000

PATENT APPLICATION: US/09/434,708

TIME: 16:52:46

Input Set : A:\B8017159.txt

Output Set: N:\CRF3\07242000\I434708.raw

```

191 Phe Leu Thr Tyr Asp Glu Val Gln Glu Arg Leu Gln Ala Cys Arg Asp
192                               245 250 255
193 Lys Pro Gly Ser Tyr Ile Phe Arg Pro Ser Cys Thr Arg Leu Gly Gln
194                               260 265 270
195 Trp Ala Ile Gly Tyr Val Ser Ser Asp Gly Ser Ile Leu Gln Thr Ile
196                               275 280 285
197 Pro Ala Asn Lys Pro Leu Ser Gln Val Leu Leu Glu Gly Gln Lys Asp
198                               290 295 300
199 Gly Phe Tyr Leu Tyr Pro Asp Gly Lys Thr His Asn Pro Asp Leu Thr
200                               305 310 315 320
201 Glu Leu Gly Gln Ala Glu Pro Gln Gln Arg Ile His Val Ser Glu Glu
202                               325 330 335
203 Gln Leu Gln Leu Tyr Trp Ala Met Asp Ser Thr Phe Glu Leu Cys Lys
204                               340 345 350
205 Ile Cys Ala Glu Ser Asn Lys Asp Val Lys Ile Glu Pro Cys Gly His
206                               355 360 365
207 Leu Leu Cys Ser Cys Cys Leu Ala Ala Trp Gln His Ser Asp Ser Gln
208                               370 375 380
209 Thr Cys Pro Phe Cys Arg Cys Glu Ile Lys Gly Trp Glu Ala Val Ser
210                               385 390 395 400
211 Ile Tyr Gln Phe His Gly Gln Ala Thr Ala Glu Asp Ser Gly Asn Ser
212                               405 410 415
213 Ser Asp Gln Glu Gly Arg Glu Leu Glu Leu Gly Gln Val Pro Leu Ser
214                               420 425 430
215 Ala Pro Pro Leu Pro Pro Arg Pro Asp Leu Pro Pro Arg Lys Pro Arg
216                               435 440 445
217 Asn Ala Gln Pro Lys Val Arg Leu Leu Lys Gly Asn Ser Pro Pro Ala
218                               450 455 460
219 Ala Leu Gly Pro Gln Asp Pro Ala Pro Ala
220                               465 470
222 <210> SEQ ID NO: 3
223 <211> LENGTH: 1422
224 <212> TYPE: DNA
225 <213> ORGANISM: Homo Sapiens
227 <400> SEQUENCE: 3
228 atggctctgg cggtggcccc gtgggggcca cagtgggaag aggcccgcg cctgggcccgg 60
229 gcagtcagga tgctgcagcg cctagaagag caatgcgtcg acccccggt gtccgtgagt 120
230 cccctctcgc tgcgggacct gctgccccgc acagcgcagc tgcttcgaga ggtggcccat 180
231 tctcggcggg cgcccgggcg aggcggcccc ggggggtccg gcggtcttgg ggactttcta 240
232 ctcatctacc tggccaatct ggaggccaag agcaggcagg tggccgcgct gctgcctccc 300
233 cggggccgaa ggagtgcaca cgacgagctc ttccggggcg gctccagact caggcgacag 360
234 ctggccaagc tggccatcat cttcagccac atgcacgcag agctgcacgc actcttcccc 420
235 ggggcaaaagt actgtggaca catgtaccag ctaccaagg ccccgcccca cactttctgg 480
236 agggaaaagt gcggagcccc gtgtgtgtgt ccctgggctg agtttgagtc cctcctgggc 540
237 acctgccacc ctgtggaacc aggtgcaca gccctggcct tgcgcaccac cattgacctc 600
238 acctgcagcg ggcacgtgtc catcttcgag ttgcacgtct tcaccaggct ctttcagcca 660
239 tggccaacac tcctcaagaa ctggcagctc ctggcagtea accacccagg ctacatggcc 720
240 ttcttcacct atgatgaggt ccaagagcgt ctgcaggcct gcagggacaa gccaggcagt 780
241 tacatcttcc gcccagctg tactcgctg ggcagtggt ccacggcta tgtgagctca 840

```

RAW SEQUENCE LISTING DATE: 07/24/2000
 PATENT APPLICATION: US/09/434,708 TIME: 16:52:46

Input Set : A:\B8017159.txt
 Output Set : N:\CRF3\07242000\I434708.raw

```

242 gatggcagca tctgcagac catccctgcc aacaaacccc tgtcccaggt gctcctggag 900
243 ggacagaagg acggcttcta cctctaccca gatggaaaaga cccacaaccc agacctgact 960
244 gagctcggcc aggcagaacc ccagcagcgc atccacgtgt cagaggagca gctgcagctc 1020
245 tactgggcca tggactccac atttgagctc tgcaagatct gtgctgagag caacaaggat 1080
246 gtgaagattg agccgtgcgg gcacctgctc tgcagctgct gcctggctgc ctggcagcac 1140
247 tcggacagcc agacctgccc cttctgcgcg tgcgagatca agggctggga ggccgtgagt 1200
248 atctaccagt tccacgggtca ggctactgct gaggactcag ggaacagcag tgaccaggaa 1260
249 ggcagggagt tggagctggg gcaggtgccc ctttcggctc ctccattgcc cccacggcca 1320
250 gatctgcccc ccaggaagcc cagaaatgcc cagccgaaag tgagactcct aaaggggaaac 1380
251 tccctccag ctgctgctggg accccaggac cctgccccgg cc 1422
253 <210> SEQ ID NO: 4
254 <211> LENGTH: 462
255 <212> TYPE: DNA
256 <213> ORGANISM: Homo Sapiens
258 <220> FEATURE:
259 <221> NAME/KEY: unsure
260 <222> LOCATION: (100)...(100)
261 <223> OTHER INFORMATION: unknown
263 <221> NAME/KEY: unsure
264 <222> LOCATION: (103)...(103)
265 <223> OTHER INFORMATION: unknown
267 <221> NAME/KEY: unsure
268 <222> LOCATION: (105)...(105)
269 <223> OTHER INFORMATION: unknown
271 <221> NAME/KEY: unsure
272 <222> LOCATION: (125)...(125)
273 <223> OTHER INFORMATION: unknown
275 <221> NAME/KEY: unsure
276 <222> LOCATION: (128)...(128)
277 <223> OTHER INFORMATION: unknown
279 <221> NAME/KEY: unsure
280 <222> LOCATION: (130)...(130)
281 <223> OTHER INFORMATION: unknown
283 <221> NAME/KEY: unsure
284 <222> LOCATION: (220)...(220)
285 <223> OTHER INFORMATION: unknown
287 <221> NAME/KEY: unsure
288 <222> LOCATION: (389)...(389)
289 <223> OTHER INFORMATION: unknown
291 <221> NAME/KEY: unsure
292 <222> LOCATION: (409)...(409)
293 <223> OTHER INFORMATION: unknown
295 <400> SEQUENCE: 4
296 tgacagacca ggcttggcag tttatttcgg tttcacaacc cccttcacgc ccttggggtc 60
W--> 297 ccttgagcag cacatctggg tgccctggcc ttcagcgggn agnggtcct ggggtcccag 120
W--> 298 cgcanangan gggagttccc ctttaggagt ctcaatttgc gctgggcatt tctgggttc 180
W--> 299 ctggggggca gatctggccc tgggggcaat ggaggagccn aaaggggcac ctgcccaggc 240
300 tccaactccc tgccttcctg gtcactgctg ttccctgagt cctcagcagt agcctgaccg 300
301 tagaactggt agatactcac ggctccacag cccttgatct cgcagcggca gaaggggcag 360

```

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

DATE: 07/24/2000

PATENT APPLICATION: US/09/434,708

TIME: 16:52:47

Input Set : A:\B8017159.txt

Output Set: N:\CRF3\07242000\I434708.raw

L:297 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:299 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:302 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:321 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:377 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:378 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6